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HONEYBEES: WINTERING, YIELDS, IMPORTS AND EXPORTS OF HONEY.

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WINTERING OF HONEYBEES, WINTER 1914–15.

The data included in returns from about 650 honey producers in 42 States, covering 80,000 colonies of bees, including full reports from the important honey-producing States, bearing primarily upon the wintering of bees and showing the losses and causes thereof for the past winter, are summarized in Tables 1 and 2.

While the figures are believed to be fairly representative and trustworthy, this can not be assumed in all cases, as some States producing considerable honey failed to furnish enough reports to give full confidence in the State average.

It will be seen by reference to column 1 that bees entered winter quarters in good condition, notwithstanding the poor season in much of the country. Two factors probably contributed largely to this result, the first being that in States where little surplus honey was stored in the spring and early summer many beekeepers refrained from removing honey from the hives, and the second that the fall nectar flow was generally good, permitting the colonies to build up and affording sufficient supplies for winter.

It will be seen by reference to columns 4 and 5 that the average quantity of honey on hand at the beginning of winter was generally in excess of what was assumed by the beekeepers reporting to be

Note.—This bulletin will be found of interest to beekeepers and dealers in bee products.

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needed to carry a colony through the winter and give it a good start at brood-rearing in the spring.

An interesting circumstance shown by a comparison of the figures in column 4 is that there seems to be little variation between the supply of food required to winter a colony in the different parts of the country, notwithstanding that the period in the Northern States between the fall and spring nectar flows (evidently interpreted by many reporters as the period between honey flows yielding a surplus) is shown in column 2 as from 7 to 9 months, with the bees confined to the hive for as much as 3 or 4 months at a time (column 3) without opportunity for a cleansing flight, while in the Southern States the interval shown between nectar flows is from 4 to 6 months only, and confinement to the hive ranges from a month down to but a few days at a time. The explanation of this uniformity in food requirements under greatly varying conditions is not entirely clear, though the comments accompanying the reports indicate that it may be due in part at least to the greater activity of bees during the winter season as one proceeds southward, the warm days permitting the winter cluster to be frequently broken, with the bees active and flying out. Also in many sections of the South brood-rearing throughout the winter is quite frequent, while in the North colonies which are well cared for and are not compelled to battle with extremely low temperatures are less likely to begin brood-rearing prematurely.

The percentage of the colonies given winter protection, as shown in column 6, *g*, very high in the Northern States, drops off rapidly to almost nothing south of the Potomac and Ohio Rivers and in the Southwestern and Pacific Coast States. In the extreme North a favorite mode of wintering is shown (column 6, *a*) to be in cellars, in the less extreme Northern States mostly by means of double-walled and packed hives (column 6, *b*), while farther south such occasional protection as is given is usually confined to supers packed with absorbent material, to wrappings of tar paper, etc., around the hive, the employment of windbreaks or open sheds, the partial covering of the hive with straw, etc. A number of reports from the Western Plateau States mention the practice of covering all but the entrance of the hive with straw overlaid with earth.

The losses during the past winter, as will be seen by reference to column 7, *j*, Table 2, generally range from 15 to 20 per cent in the more northerly States of the white-clover belt, from 5 to 15 in the lower portions of that belt and in the Southeastern and South-Central States, and in the neighborhood of 5 to 10 per cent in the important honey-producing States of Texas, Colorado, Utah, and California, with but 2 per cent in Arizona. The average for the entire country is 12.6 per cent.

The cause of loss most frequently given is missing or worn-out queens. The most important absolute item of loss is starvation. A serious loss is shown from poor quality of winter stores, usually aster honey, which in some sections, with long confinement, is said to induce dysentery. Late and weak swarms often succumb. Losses of colonies deficient in young bees were heavy in districts where a late summer drought interfered with fall brood-rearing. Various other causes mentioned are smothering and exposure, which have been included with cold, long confinement, robbing, brood disease, mice, moths, ants, and small predatory animals. A considerable percentage of reporters failed to state the cause of death, either from carelessness or perhaps disinclination to mention starvation as the cause. That so many should have been shown to die from the latter cause, which can in a great majority of cases be avoided by moderation in removing surplus honey or absolutely prevented by the proper feeding of sugar sirup in the late fall or early spring, is a regrettable exhibit.

CONDITIONS AND HONEY YIELDS, SEASON 1915.

The number of colonies, spring count, reported this season averages for the entire United States two-tenths of 1 per cent less than last year (Table 3, column 8). Increases of 15 per cent in Texas, 10 per cent in California and Arizona, and rather general increases in the northern tier of States from Michigan westward are offset by decreases of 14 per cent in Missouri, 10 per cent in New York and Indiana, 8 per cent in Illinois, Nebraska, and Arkansas, and smaller percentages in a number of other important honey-producing States.

The condition of the colonies on May 1 (column 9, *a*), largely measured by the number of bees and amount of brood compared with a normal condition of populousness and vigor at that date, was 92.7 per cent for the United States as a whole, being 5.1 per cent lower than on May 1 last year. (See column 9, *b*.) This may be ascribed in part to the late cold spring over much of the country, which delayed brood-rearing, and to some extent to the poor quality of the winter stores in many States, which weakened the colonies.

The condition is shown below 90 in New York, Maryland, Ohio, Illinois, Missouri, Nebraska, Kansas, Oklahoma, and Arkansas, and 90 or slightly above in Pennsylvania, Virginia, Indiana, Iowa, Tennessee, and Alabama. In each of the States named except Kansas it was lower than last year.

The condition of honey plants, shown on May 1 as 93.3 per cent, is 5.8 per cent lower than last season at that date (columns 10, *a*, and 10, *b*.) As weather conditions since May 1 over the country as a whole have been decidedly better for plant growth than last year, when droughty conditions prevailed in many sections, the condition

of most honey plants east of the Rockies improved materially after the date of this inquiry.

The July 1 reports indicated that the honey season had been late from 1 to 3 weeks over most of the country, due to cold and generally wet weather. The prospects in the Ohio Valley region were very poor owing largely to the damage to white clover from former droughts. The crop outlook from clover in the Central Atlantic and New England States and west of the Mississippi was fair to good. The outlook for alfalfa honey in Utah and in sections of adjoining States was unfavorable because of damage to alfalfa from insects. Freezes in Colorado had destroyed the fruit bloom. The relatively poor crop at that date in California was reported as due mostly to light nectar flows from orange and button sage.

The returns from the States that normally produce a fair proportion of their surplus honey crop by July 1 were sufficiently complete to permit of establishing satisfactory estimates except for two States, which are omitted. The reports from Northern and Mountain States which usually produce little surplus by July 1 were not as numerous, and the averages drawn from these are therefore not considered altogether dependable. It has been necessary to omit a number of such States for lack of information. The influence of these upon the United States averages is fortunately not large.

The average yield of surplus honey per colony up to July 1, 1915, for the States reporting is estimated at 18.3 pounds against 20.7 pounds last year. (Columns 11, *a*, and 11, *b*.)

Last year the proportion of the total surplus produced by July 1 was approximately 65 per cent, the early flow being favorable and that later in the summer poor. This year the proportion is 50.6 per cent, the summer bloom having been abundant throughout most of the Northern, Central, and Eastern States. Notwithstanding the season's abundant bloom, the large proportion of rainy and cool days, by suppressing the secretion of nectar, washing nectar from the bloom, and most of all by keeping bees confined to the hive, has resulted in merely a fair crop instead of a heavy one.

The estimate of the usual production by July 1 is 51.9 per cent. These estimates on the proportion of honey usually produced by July 1 (11, *c*) are of much interest, indicating the degree to which the July 1 report may be accepted by producers and others interested in forming a judgment of probable supplies and prices. It appears that, speaking generally, from two-thirds to three-fourths of the surplus is ordinarily produced by that date in the Southern States, including Maryland, Tennessee, and Arkansas, under one-fourth in the extreme Northern and Mountain States, and 40 to 50 per cent in most of the remainder. The usual average for the entire United States is estimated by correspondents to be slightly over half the

year's total. After a few years it will be possible to substitute for these estimates figures based upon the records now being built up.

The average yield for the United States of surplus honey per colony in 1915 according to the September 1 estimate (11, *d*) is 36.2 pounds as against 32.2 pounds in 1914 (11, *e*), an increase over last year of approximately 12 per cent, and a decrease of 11 per cent under the yield of 40.6 pounds in 1913.

These estimates of yield per colony are believed to be somewhat high for the average producer. They are based primarily upon reports from a special list of reporters who are in the main progressive beekeepers, utilizing modern equipment, and obtaining thereby larger yields than the average person who keeps bees. While they are asked to report for the community whenever possible, the reports are often limited to or influenced by the results in their own apiaries. While these averages are checked and modified by returns from the regular crop reports, the figures shown, though below the average for commercial apiaries, are likely above the average for all beekeepers. In any event, the figures on relative number of colonies and yields per colony for 1915, 1914, and 1913 are reasonably comparable, having been furnished by the same reporters, and represent at least the relative production of the three years, as estimated September 1, 1915.

In May, 1914, the correspondents of the bureau estimated the number of colonies to be 103.7 per cent of 1913, while this year the number is shown as 99.8 per cent of 1914. The total production this year, so far as could be estimated on September 1, will be 112 per cent of 1914 and 92.3 per cent of 1913.

The total absolute production of surplus honey in 1915 can not be satisfactorily estimated because of the lack of dependable knowledge of the actual number of colonies.

It is estimated that of the total production, California furnished this year about 12 per cent, Texas 8 per cent, and Iowa and New York 6 per cent each.

The form of honey produced (Table 4, 12) shows that this year, in comparison with last, a slightly less proportion of comb and extracted honey and a slightly greater proportion of bulk comb honey has been obtained.

The Northern States generally, with the exception of Illinois, Wisconsin, and Nebraska, show a high proportion (one-half to two-thirds) of their production in the form of comb honey in sections, while in the South and West generally this form is only from one-third to one-half of all, and in a few States very much less. Conversely, the proportion of bulk comb or chunk honey is relatively high in the Southern States and of extracted in the Western, the latter form comprising 90

per cent of the total crop in Arizona, 85 per cent in Utah and New Mexico, and 82 per cent in California.

The reports on disposition of honey (Table 4, 13) indicate that while for the entire United States 60.8 per cent of the honey removed from the hive is consumed locally, more than one-half is shipped out of the locality where produced in the States of Vermont, New York, Florida, Kentucky, Louisiana, Texas, Wyoming, Colorado, New Mexico, Arizona, Utah, Idaho, and California. Of the 39.2 per cent thus entering this year the main trade channels as a distinctly commercial crop, California furnished about one-fourth, mostly extracted, and Texas one-eighth, practically all extracted or bulk comb honey.

The losses shown to colonies during the season from diseases (Table 4, 14) averages 1.5 per cent for the United States, being most severe in the States of New Jersey, Pennsylvania, Nebraska, Utah, Idaho, and California. The principal bee diseases mentioned were American foulbrood and European foulbrood.

The strength of colonies on September 1 compared with normal strength on that date (Table 4, 15) averaged 97.3 per cent for the United States, being above normal in many of the Northern States. The long drawn out, even if intermittent, flow of nectar over much of the country, while not resulting in a heavy honey crop, has encouraged an unusual amount of brood rearing during the summer, so that colonies are stronger than usual in those sections.

Information reaching the bureau on mid-September indicates that the fall flow is proving very abundant throughout the Middle West and under these conditions, which are believed to obtain also in most of the country east of the Alleghenies, bees in the territory indicated are rapidly accumulating a comfortable supply of winter stores. In many sections they are storing considerable surplus.

IMPORTS AND EXPORTS OF HONEY.

As a result, unquestionably, of the interference of the European war with the exports to that continent of honey from Mexico and the West Indies, much more than the usual supply from the countries to the south has been forced upon the United States markets since the war began.

The total foreign imports into this country for the five fiscal years ending June 30, 1910 to 1914, inclusive, were 104, 113, 115, 116, and 75 thousands of gallons, respectively, of which normally about 45,000 gallons came from Mexico, about 50,000 from Cuba, and 5,000 from Haiti. The import duty on this honey from Cuba is 8 cents per gallon, and from other foreign countries 10 cents. For the first three months of the fiscal year 1915, beginning July 1, 1914, the imports were 53,000 gallons, during the next quarter, ending December 31, they were 85,000 gallons. For the entire fiscal year they amounted

to 303,965 gallons, about three times the quantity imported from foreign countries in any previous entire year, having a stated value of approximately $124,843. Of the total imports for the year, 92,876 gallons came from Mexico, 164,042 from Cuba, 7,309 from Haiti, and 33,571 from Santo Domingo.

In addition to the imports mentioned, this country also received honey from the island possessions, that from Porto Rico and Hawaii this year exceeding slightly in value and probably also in quantity the imports just mentioned from foreign countries. Hawaii ordinarily furnishes shipments to the value of $35,000; the imports this year totaled $35,536. Porto Rico, by reason of the rapid development of this industry in that island, increased its shipments from the value of $8,018 in 1910 to $17,904 in 1911, $42,000 in 1912, $60,000 in 1913, $91,000 in 1914, and for the present year to $94,895.

Practically all of this honey is extracted, and that most of it is of the low grades, used by bakers and not for table use, is indicated by the price of the foreign imports, which averaged during the five years ending June 30, 1914, between 50 and 60 cents per gallon. The pressure of the heavy supply on the markets lowered the import price of foreign honey to 41 cents per gallon before December of last year, and the average import price for the fiscal year just closed is about 41.1 cents.

The total honey crop of the continental United States in 1909 was reported by the census to be about 55,000,000 pounds; expressed in terms of gallons, roughly 5,000,000. This represents production on farms alone and is an admittedly low estimate even for the farm production, as only a little over half of the farms showing bees gave a report on honey production. It is impossible to know what proportion of these farms failed to report honey production because no honey was actually obtained from the bees, and what because of oversight, indifference, or lack of information. No record appears to have been taken of the large production by beekeepers not farmers.

Compared with the total production of the United States as reported by the census, the heavy imports for the present fiscal year, which from all sources probably total over 600,000 gallons, are therefore about 12 per cent, though probably considerably less, if compared with the actual production. Compared with the portion of the home crop actually marketed, however, the percentage would be much larger, and its absolute bulk compared to the quantity of low-grade extracted honey produced here for market is so great that it has seriously interfered with the marketing of the latter and, combined with the financial depression in the South, where the lower grades are largely produced and consumed, has forced the prices of such grades to extremely low figures. The heavy inward movement of foreign

honey shows no present signs of abatement and must be accepted as a probable factor for some time to come.

The quantities of honey exported are not stated in the official returns of exports, but the values of total exports of this commodity for the fiscal years 1910 to 1914, inclusive, were 159, 82, 213, 182, and 136 thousands of dollars, respectively. About two-thirds of this honey is ordinarily shipped from the Pacific coast, 10 to 20 per cent from Porto Rico and Hawaii, and most of the remainder from the port of New York. Evidently, from its source, it is mostly extracted. The exports have been principally to Germany, which has taken from 40 to 60 per cent annually. Canada has taken from 15 to 20 per cent. The exports to the United Kingdom amounted to $59,000 in 1910, but had fallen to $4,000 in 1914. The exports for the present fiscal year, beginning July 1, 1914, just prior to the opening of the European war, amounted to approximately $114,000, the exports to Germany being $10,200, to Denmark $14,375, to the United Kingdom $53,763, and to Canada $14,930. The exports are therefore seen to have suffered some reduction from past years as a result of the war.

The effect of both these movements—increased imports and decreased exports—is to increase the amount of honey that must be disposed of in our home markets. It will be observed that this commerce is concerned in but very slight measure with comb honey, for good grades of which the home market furnishes sufficient demand.

TABLE 1.—*Fall condition of honey bees, 1914; winter confinement, food supplies, and extra protection given during winter 1914–15.*

State.	1 Condition of colonies at beginning of last winter (fall 1914).	2 Usual length of time between fall and spring nectar flows.	3 Longest period confined to hives in usual winter without a flight.	4 Honey needed to winter a colony outdoors.	5 Honey on hand per colony at beginning of last winter.	6 Extra winter protection furnished colonies.						
						Cellars. (*a*)	Double-walled and packed hives. (*b*)	Packed and in cellar (*a* and *b* not separated). (*c*)	Packed, super. (*d*)	Wrappings of tar paper, etc. (*e*)	Straw covering and miscellaneous. (*f*)	Total per cent given winter protection. (*g*)
	P. ct.	*Mos.*	*Mos.*	*Lbs.*	*Lbs.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*
Maine	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire	100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vermont	89	7.6	3.6	29	25	67	14	.....	.....	.....	14	95
Massachusetts	98	6.2	1.9	29	34	17	39	20	.....	.....	.....	76
Connecticut	105	6.1	1.7	35	28	6	.....	46	.....	.....	.....	50
New York	85	7.2	2.8	31	29	25	33	22	.....	.....	.....	80
New Jersey	99	5.7	2.0	25	27	.....	30	.....	.....	.....	.....	30
Pennsylvania	94	7.0	2.2	31	30	1	35	4	15	3	2	60
Maryland	90	6.0	1.3	30	30	1	9	.....	10	5	.....	25
Virginia	95	5.7	1.3	28	32	.....	.....	.....	3	.....	1	4
West Virginia	90	7.0	.....	35	35	.....	10	.....	.....	.....	.....	10
North Carolina	90	4.6	1.2	26	25	.....	5	.....	.....	.....	.....	5
South Carolina	101	5.2	1.0	30	31	.....	2	.....	.....	.....	.....	2
Georgia	97	4.8	1.0	27	29	.....	.....	.....	.....	.....	1	1
Florida	97	4.2	.5	40	40	.....	.....	.....	.....	.....	.....	0
Ohio	92	6.3	2.0	29	33	10	26	.....	3	6	.....	45
Indiana	94	6.4	2.0	31	34	3	30	.....	4	3	.....	40
Illinois	89	6.8	2.5	32	30	20	26	.....	2	.....	2	50
Michigan	96	7.0	3.2	29	29	30	13	34	.....	.....	3	80
Wisconsin	100	7.0	3.4	31	34	74	16	5	.....	2	.....	97
Minnesota	92	7.6	3.3	36	38	69	.....	30	.....	.....	.....	99
Iowa	86	6.5	2.2	32	28	40	10	21	.....	2	2	75
Missouri	78	6.4	1.6	33	26	.....	5	.....	12	.....	3	20
South Dakota	95	7.0	2.7	37	41	44	1	6	.....	.....	19	70
Nebraska	100	6.4	1.3	32	35	1	30	.....	12	.....	7	50
Kansas	90	5.7	1.6	33	36	.....	1	.....	3	1	5	10
Kentucky	99	5.9	1.4	34	42	.....	2	.....	6	.....	.....	8
Tennessee	96	5.5	1.1	32	36	.....	2	.....	.....	2	.....	4
Alabama	91	5.0	.6	35	36	.....	.....	.....	1	.....	.....	1
Mississippi	100	5.6	.5	29	32	.....	.....	.....	.....	.....	.....	0
Louisiana	92	.....	.5	30	32	.....	.....	.....	.....	.....	.....	0
Texas	104	4.1	.6	34	41	.....	.....	.....	1	.....	.....	1
Oklahoma	81	5.9	1.2	30	25	.....	.....	.....	.....	8	.....	8
Arkansas	85	4.0	.9	35	.....	.....	.....	.....	.....	.....	.....	0
Wyoming	102	8.5	1.4	25	38	26	9	.....	.....	30	.....	65
Colorado	88	7.7	1.2	37	39	1	1	.....	5	4	1	12
New Mexico	104	6.3	.5	36	36	.....	2	.....	2	.....	.....	4
Arizona	100	3.6	.1	33	34	.....	.....	.....	.....	.....	.....	0
Utah	100	8.8	1.4	49	44	1	30	.....	12	7	.....	50
Nevada	100	7.0	1.0	40	35	.....	.....	.....	.....	.....	.....	0
Idaho	95	7.3	3.1	37	39	3	4	20	2	1	25	55
Washington	109	6.4	1.2	37	41	.....	3	.....	1	1	.....	5
Oregon	99	5.0	.7	26	31	.....	7	.....	.....	.....	.....	7
California	103	4.5	.5	33	44	.....	.....	.....	.....	.....	.....	0
United States average	93.6	5.8	1.5	31.9	33.5	9.1	9.0	4.3	2.5	.9	1.0	26.8

TABLE 2.—*Winter losses of honey bees; causes and percentage of colonies lost, winter 1914–15.*

State.	7 Causes and percentages of winter losses.									
	(*a*) Queen lost or impotent.	(*b*) Starvation.	(*c*) Cold, exposure, smothering.	(*d*) Moths and ants.	(*e*) Foul brood and other diseases.	(*f*) Poor honey, dysentery.	(*g*) Late and weak swarms.	(*h*) Lack of young bees.	(*i*) Miscellaneous and unknown.	(*j*) Total loss of colonies.
	P. ct.	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*
Vermont	0.1	0.4	0.1	.....	.....	2.7	0.1	.....	7.6	11.0
Massachusetts	.....	.....	2.1	.....	.....	.5	11.1	.....	.....	13.7
Connecticut	.....	16.0	.....	.....	.....	.....	.....	.....	.....	16.0
New York	1.2	.6	.1	.....	.....	9.4	6.4	.....	2.1	19.8
New Jersey	2.2	.....	.....	.....	0.1	.5	1.5	1.3	.5	6.1
Pennsylvania	2.2	1.2	1.7	.....	.....	1.8	2.7	.2	5.9	15.7
Maryland	.3	4.7	.....	0.2	.....	3.7	1.4	1.1	.....	11.4
Virginia	1.5	1.8	.1	.6	.....	1.3	1.4	.4	4.1	11.2
West Virginia	.....	.....	.....	.....	.....	5.7	.....	.....	.....	5.7
North Carolina	.4	2.6	.....	1.7	.....	.....	.4	.....	.....	5.1
South Carolina	5.7	3.3	.....	3.7	.....	.....	.4	.....	.....	13.1
Georgia	2.8	10.7	.....	1.1	.....	.....	.....	.....	.1	14.7
Florida	2.3	.....	.....	.....	.....	.....	2.3	.....	3.8	8.4
Ohio	.8	.....	2.6	.....	1.5	5.4	.2	5.5	.1	16.1
Indiana	.9	1.4	2.2	.....	.6	2.9	.....	1.7	1.1	10.8
Illinois	2.1	.5	2.5	.....	.....	4.3	1.8	.....	.1	11.3
Michigan	2.9	2.6	1.6	.....	.7	2.1	.2	.....	.6	10.7
Wisconsin	4.1	.....	.1	.....	.....	.6	.....	.....	.6	5.4
Minnesota	.2	10.5	.....	.....	.....	5.3	.....	.....	.5	16.5
Iowa	2.4	.1	.....	.....	1.3	3.4	2.7	2.0	1.1	13.0
Missouri	.....	.....	4.3	.....	.....	3.3	.....	.....	23.4	31.0
South Dakota	.4	2.8	3.0	.....	.....	.....	.....	.8	.8	7.8
Nebraska	2.4	3.6	2.6	.....	.....	3.6	.....	.....	3.6	15.8
Kansas	.4	3.5	.1	.....	.....	.....	3.3	.....	.1	7.4
Kentucky	.9	2.7	.7	.1	.2	3.2	.....	.....	1.7	9.5
Tennessee	1.4	3.7	.3	.3	.....	1.0	1.7	.....	.5	8.9
Alabama	.8	10.5	.....	.1	.1	.....	.....	.....	5.8	17.3
Mississippi	.7	11.4	.....	1.3	2.2	.5	.....	.....	7.1	23.2
Louisiana	2.1	5.6	.....	.....	.....	.....	.....	.....	.....	7.7
Texas	1.5	3.1	.....	.2	.2	.....	1.5	.....	.6	7.1
Oklahoma	1.0	1.0	2.4	.....	.....	.3	2.0	.....	8.7	15.4
Arkansas	.....	25.0	.....	.....	.....	.....	.....	.....	.....	25.0
Wyoming	1.7	17.4	.....	.....	.....	.....	.....	.....	.....	19.1
Colorado	2.3	.5	1.4	.....	.6	.8	1.5	1.1	2.3	10.5
New Mexico	1.7	.....	.....	.....	.....	.....	.....	2.5	5.0	9.2
Arizona	1.5	.....	.....	.....	.2	.....	.3	.....	.....	2.0
Utah	4.8	.....	1.0	.....	.1	3.3	.....	1.0	.3	10.5
Nevada	.....	.....	.....	.....	.....	.....	.....	.....	5.0	5.0
Idaho	2.6	.2	.2	.....	.....	.6	.6	1.1	.6	5.9
Washington	.9	.2	16.9	.....	.....	.....	.8	.....	1.0	19.8
Oregon	2.2	.....	.....	.2	1.0	.....	.....	.....	.5	3.9
California	2.5	.1	.....	.....	1.2	.....	.3	.....	.9	5.0
United States, average	1.5	3.2	.9	.3	.3	2.1	1.1	.4	2.8	12.6

TABLE 3.—*Number of colonies (spring count) 1915, condition of bees and honey plants May 1, estimated yield of surplus honey July 1, and indicated yield Sept. 1 for entire season, 1915.*

State.	8	9		10		11					
	Number of colonies, spring count, 1915, compared with previous year.	Condition of colonies compared with normal.		Condition of honey plants compared with normal.		Yield of surplus honey per colony.					
		(*a*) May 1, 1915.	(*b*) May 1, 1914.	(*a*) May 1, 1915.	(*b*) May 1, 1914.	(*a*) Reported to July 1, 1915.	(*b*) Reported to July 1, 1914.	(*c*) Per cent of total surplus, usually produced by July 1.	(*d*) For entire season, estimated Sept. 1.		
									1915.	1914.	1913.
	No.	*P. ct.*	*P. ct.*	*P. ct.*	*P. ct.*	*Lbs.*	*Lbs.*	*P. ct.*	*Lbs.*	*Lbs.*	*Lbs.*
Maine	100	99	94	99	93	8	8	18	25	30	38
New Hampshire	103	100	91	98	95	18	25	50	28	30	27
Vermont	96	95	95	100	98	5	4	12	40	20	33
Massachusetts	101	96	90	93	91	12	7	47	22	22	31
Rhode Island	100	98	96	90	93	35	10	10	35	40	45
Connecticut	110	98	85	100	90	5	6	17	35	28	35
New York	90	88	95	98	95	13	9	30	45	22	37
New Jersey	98	98	98	97	98	5	8	54	25	12	40
Pennsylvania	96	91	94	94	93	10	15	40	28	28	45
Delaware	98	96	98	94	95	12	18	50	12	20	21
Maryland	102	88	95	91	93	20	32	70	20	25	40
Virginia	106	92	93	87	90	31	32	72	40	35	38
West Virginia	95	93	95	92	94	.....	.....	.....	30	25	20
North Carolina	102	96	92	93	91	21	24	64	28	28	25
South Carolina	101	93	91	92	91	21	21	68	20	18	25
Georgia	100	93	94	92	93	28	30	72	30	30	30
Florida	100	93	97	92	95	48	46	60	45	42	50
Ohio	98	88	100	93	100	5	14	46	20	23	50
Indiana	90	90	96	90	95	7	16	51	24	25	60
Illinois	92	85	98	82	85	6	8	45	25	17	60
Michigan	104	97	98	98	94	13	26	45	45	37	50
Wisconsin	103	98	110	100	93	14	24	40	50	40	60
Minnesota	102	97	98	99	95	12	14	24	50	35	60
Iowa	94	91	100	95	95	16	15	40	45	25	65
Missouri	86	84	85	86	85	18	5	51	33	8	30
North Dakota	105	100	102	100	100	.....	.....	.....	.....	.....	.....
South Dakota	105	93	105	98	98	1	10	9	55	25	50
Nebraska	92	88	95	96	95	6	6	18	40	30	50
Kansas	100	88	86	95	85	6	8	29	30	20	25
Kentucky	102	95	95	91	93	25	8	48	35	25	40
Tennessee	102	92	95	88	92	26	25	67	17	28	30
Alabama	101	91	97	90	95	30	30	85	30	28	35
Mississippi	100	95	93	92	95	25	26	77	33	33	35
Louisiana	96	90	91	90	90	.....	.....	.....	33	35	35
Texas	115	97	115	96	115	17	42	76	40	55	35
Oklahoma	99	89	98	97	96	2	5	33	30	25	35
Arkansas	92	87	92	88	90	15	12	65	20	20	30
Montana	125	97	105	100	100	.....	.....	.....	63	62	35
Wyoming	120	103	108	100	100	.....	.....	.....	70	70	75
Colorado	101	95	110	97	107	1	2	3	29	43	60
New Mexico	115	96	105	103	105	15	7	10	40	55	50
Arizona	110	104	105	110	105	86	59	78	70	60	70
Utah	105	99	105	98	102	8	11	15	50	65	70
Nevada	100	100	100	100	100	.....	.....	.....	65	40	75
Idaho	105	99	115	101	110	0	4	7	63	56	55
Washington	103	100	102	105	100	1	3	19	44	40	45
Oregon	98	99	105	100	100	16	15	45	30	35	40
California	110	100	107	100	120	35	45	52	75	75	36
United States average	99.8	92.7	97.8	93.3	99.1	18.3	20.7	51.9	36.2	32.2	40.6

TABLE 4.—*Form of honey produced, percentage used locally and that sold to outside markets, losses of colonies during season from disease, and strength of colonies on Sept. 1, 1915.*

State.	12 Form of honey produced.						13 Disposition.		14	15
	(a) Comb in sections.		(b) Extracted.		(c) Bulk comb "chunk."		(a) Used locally.	(b) Outside markets.	Colonies lost from disease, 1915.	Strength of colonies Sept. 1, compared with normal.
	1915	1914	1915	1914	1915	1914				
	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
Maine [1]	80	80	17	15	3	5	75	25	5.0	88
New Hampshire [1]	85	.....	15	.....	0	.....	.....	.....	0	100
Vermont [1]	90	66	8	28	2	6	5	95	2.0	110
Massachusetts [1]	87	67	13	32	0	0.7	94	6	1.0	105
Rhode Island [1]	20	5	80	95	0	0	100	0	1.0	105
Connecticut	61	48	29	47	10	5	83	17	.2	97
New York	61	47	39	50	0	3	45	55	.9	104
New Jersey [1]	77	25	23	75	0	0	96	4	5.0	94
Pennsylvania	60	65	30	29	10	6	75	25	4.0	95
Delaware [1]	60	.....	30	.....	10	.....	.....	.....	0	100
Maryland	85	69	10	22	5	9	80	20	.8	105
Virginia	75	87	13	12	12	1	75	25	2.3	103
West Virginia [1]	.....	57	.....	38	.....	5	.....	.....	.....	.....
North Carolina [1]	34	45	17	30	49	25	51	49	0	101
South Carolina	40	.....	30	.....	30	.....	98	2	.4	98
Georgia [1]	40	28	16	33	44	39	75	25	1.0	94
Florida [1]	55	11	45	88	0	1	42	58	0	80
Ohio	65	66	32	32	3	2	75	25	2.0	95
Indiana	64	52	21	36	15	12	97	3	1.5	100
Illinois [1]	34	42	65	56	1	2	59	41	2.0	96
Michigan	54	56	46	43	0	1	54	46	2.0	96
Wisconsin	43	41	57	58	0	1	58	42	1.5	97
Minnesota [1]	50	36	45	63	5	1	55	45	.1	106
Iowa	58	56	40	42	2	2	65	35	2.0	102
Missouri	34	32	37	38	29	30	95	5	2.4	102
North Dakota [1]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota	62	77	30	22	8	1	85	15	2.0	103
Nebraska [1]	36	43	63	42	1	15	64	36	5.0	100
Kansas [1]	65	67	25	28	10	5	99	1	.1	99
Kentucky	45	49	50	33	5	18	33	67	1.0	98
Tennessee	22	31	28	23	50	46	88	12	0	89
Alabama	32	34	42	41	26	25	55	45	0	95
Mississippi	19	49	41	26	40	25	71	29	1.0	94
Louisiana [1]	10	0	80	100	10	0	35	65	0	100
Texas	1	4	52	51	47	45	35	65	.5	95
Oklahoma [1]	37	36	15	17	48	47	99	1	.3	100
Arkansas [1]	28	25	32	15	40	60	92	8	0	94
Montana [1]	70	.....	27	.....	3	.....	67	33	3.0	95
Wyoming [1]	97	92	3	8	0	0	6	94	.3	100
Colorado	70	67	30	30	0	3	23	77	2.0	89
New Mexico	5	31	85	61	10	8	42	58	1.4	95
Arizona	10	6	90	94	0	0	36	64	1.0	96
Utah [1]	15	17	85	83	0	0	32	68	4.0	95
Nevada [1]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Idaho [1]	60	47	37	51	3	2	23	77	5.0	101
Washington [1]	32	46	68	54	0	0	54	46	2.0	95
Oregon [1]	48	64	52	34	0	2	92	8	0	90
California	17	18	82	79	1	3	13	87	4.5	97
United States average	40.7	41.7	41.3	42.1	18.1	16.2	60.8	39.2	1.5	97.3

[1] Not enough reports for fully dependable averages.

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